

- at least one variation comprises T67C; T124A; or 187INS:GGC,  
wherein the presence of said at least one variation in said human mu opioid receptor gene of said first allele is expected to be indicative of said disease or disorder related to a physiological function regulated by the HPA or HPG axes.
139. The method of Claim 138, wherein diagnosing a disease or disorder related to a physiological function regulated by the HPA or HPG further comprises the step of determining whether said second allele of said bodily sample comprises a human mu opioid receptor gene comprising a DNA sequence having at least one variation in SEQ ID NO:1, wherein said variation comprises T67C; T124A; or 187INS:GGC, such that the presence of said at least one variation in said second allele is expected to be indicative of a disease or disorder related to a physiological function regulated by the HPA or HPG axes, wherein said second allele of said standard comprises a human mu opioid receptor gene comprising a DNA sequence of SEQ ID NO:1.
140. The method of Claim 139, wherein said physiological function comprises reproductive or sexual function, gastrointestinal motility, immune response, or ability to withstand stress.
141. The method of Claim 139, wherein said disease or disorder comprises infertility, constipation, diarrhea, decreased immune response relative to immune response in said standard, or decreased ability to withstand stress relative to ability to withstand stress of said standard.

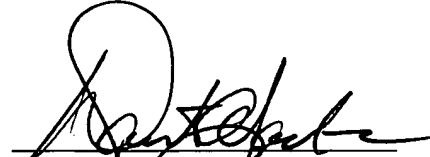
### **Remarks**

The new claims presented above which replace the original claims contain no new matter

and were provided simply to reduce the number of claims in the application. Examination on the merits is courteously solicited.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'David A. Jackson', is written over a horizontal line.

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